

REMARKS

Pursuant to the 37 CFR \$1.112, applicants respectfully request the reconsideration and re-examination of the present application.

Claims 1-4 were rejected under 35 USC \$103(a) as allegedly being unpatentable over BIESIADA in view of HAYASHI.

BIESIADA discloses polyester plasticizers which comprise a diol component comprising 2-methyl-1,3-propanediol and 1,2-propanediol, an acid component of adipic acid, and a chain terminator. The polyester plasticizers can impart to a polymer superior plasticization, improved resistance to abstraction and low-temperature flexibility and exhibit excellent durability and plasticizing efficiency (see lines 51-59 in column 4).

However, as acknowledged by the Official Action, BIESIADA fails to disclose the use of 3-methyl-1,5-pentanediol as the diol component. In addition, BIESIADA does not mention the oil resistance effect exhibited by polyester plasticizers. In an effort to remedy the deficiencies of BEISIADA for reference purposes, the Official Action cites to HAYASHI.

HAYASHI discloses a plastisol composition containing a polyester plasticizer obtained by a reaction using 3-methyl-1,5-pentanediol. When a middle coat and a top coat are coated on a coating film formed of the plastisol composition of HAYASHI, a good coating appearance can be achieved.

However, HAYASHI does not describe or suggest using 2-methyl-1,3-propanediol as the diol component or even discuss oil resistance exhibited by the polyester plasticizer.

This stands in contrast to the claimed invention. The polyester plasticizer of the claimed invention exhibits an efficient and high level of plasticization. Indeed, it is clear from the comparison between the examples and comparative examples discussed below that the polyester plasticizer of the claimed invention unexpectedly exhibits an excellent oil resistance to synthetic resins.

As the Examiner is aware, the Patent Office must consider objective indicia of non-obviousness whenever present. Specifically, the Patent Office is bound to consider evidence of unexpected results, commercial success, long-felt but unresolved needs, failure of others, skepticism of experts. *Stratoflex, Inc. v Aeroquip Corp.*, 713 F.2d 1530, 1538 (Fed. Cir. 1983) Federal Circuit precedent mandates consideration of comparative data in the specification which is intended to illustrate the claimed invention in reaching a conclusion with regard to the obviousness of the claims. *In re Margolis*, 785 F.2d 1029 (Fed. Cir. 1986) (vacating Board decision which refused to consider data in the specification which compared an embodiment of the invention with the prior art product and noting that such evidence spoke to unexpected results and non-obviousness). Furthermore, evidence of unexpected properties may be in the form

of a direct or indirect comparison of the claimed invention with the closest prior art which is commensurate in scope with the claims. MPEP 716.02(b)(III). It is apparent that the claimed invention exhibits unexpected results in light of the remarks that follow.

When using only 2-methyl-1,3-propanediol as the diol component, the polyester plasticizer No. 4 which is obtained imparts to a polyvinyl chloride resin a poor oil resistance (see specification, Comparative Example 1).

When using 2-methyl-1,3-propanediol, neopentyl glycol, and 3-methyl-1,5-pentanediol as recited in claim 1, the polyester plasticizer No. 5 obtained exhibits decreased oil resistance as compared to polyester plasticizer No. 4 in Comparative Example 1 (see Comparative Example 2).

When using both 2-methyl-1,3-propanediol and 3-methyl-1,5-pentanediol as the diol component wherein the amount of the latter is larger than that recited in claim 1 of the present invention, the polyester plasticizer No. 6 obtained imparts to a polyvinyl chloride resin an inferior oil resistance as compared to polyester plasticizer No. 4 in Comparative Example 1 (see Comparative Example 3).

However, using the combination of 2-methyl-1,3-propanediol and 3-methyl-1,5-pentanediol as the diol component in the specific amount ratio recited in claim 1, the polyester plasticizers No. 1 to 3 impart excellent oil resistance to

synthetic resins. For example, an oil resistance test shows that the elongation is 99 or 100% of the original sheet, remains almost unchanged, and the tensile strength falls within the range of 105 to 110% of the original sheet, which tends to rather rise than decrease (see Examples 1 to 3).

Thus, the 3-methyl-1,5-pentanediol provides a polyester plasticizer that exhibits a superior and unexpected oil resistance effect when used together with 2-methyl-1,3-propanediol as the diol component.

Furthermore, the Examiner's attention is respectfully directed to the declaration by Shinji KOUBE. The declaration shows that when using 2-methyl-1,3-propanediol and 3-methyl-1,5-pentanediol as a diol component, wherein the amount of the latter is larger than that recited in claim 1, the polyester plasticizer No. 6 obtained imparts to a polyvinyl chloride resin an inferior oil resistance than that brought about by the claimed invention.

In this regard, it is believed that the declaration provides further evidence as to the non-obviousness of the claimed invention.

Neither publication discloses nor suggests a polyester plasticizer with such unexpected properties. In view of the above, applicants respectfully submit that one skilled in the art would lack the motivation to combine and modify the publications so as to obtain the claimed invention.

The Examiner is also respectfully reminded that a critical step in analyzing obviousness pursuant to 35 U.S.C. §103(a) is casting the mind back to the time of the invention, to consider the thinking of one of ordinary skill in the art, only guided by the publications and then-accepted wisdom in the field. Close adherence to this methodology is important in cases where the invention itself may prompt an Examiner to "fall victim to the insidious effect of a hindsight syndrome, wherein that which only the invention taught is used against its teacher." Indeed, to establish a prima facie case of obviousness, there must be some motivation, suggestion or teaching of the desirability of making the specific combination that was made by the applicant. *In re Kotzab*, 217 F.3d 1365, 1369-70, 55 USPQ 2d 1313, 1362 (Fed. Circ. 2000). The fact that the prior art could be so modified would not have made the modification itself obvious unless the cited publications themselves suggested the desirability of the modification. *In re Gordon*, 733 F.2d 900, 902, 221 USPQ 1125, 1127 (Fed. Circ. 1984).

In light of the lack of a motivation, suggestion or teaching of the desirability of making the claimed combination, applicant believes that the publication fails to disclose or suggest the claimed invention.

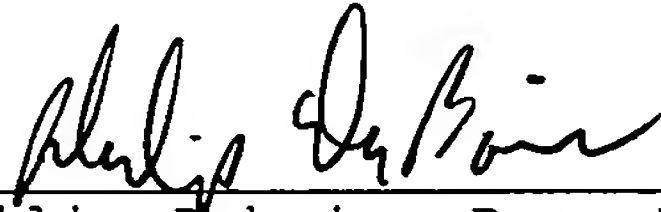
Thus, applicants respectfully request that the obviousness rejection be withdrawn.

In view of the present amendment and the foregoing remarks, therefore, applicants believe that the present application is in condition for allowance at the time of the next Official Action. Allowance and passage to issue on that basis is respectfully requested.

The Commissioner is hereby authorized in this, concurrent, and future replies, to charge payment or credit any overpayment to Deposit Account No. 25-0120 for any additional fees required under 37 C.F.R. § 1.16 or under 37 C.F.R. § 1.17.

Respectfully submitted,

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